UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

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Crescent Hydroelectric : Project No. 4678-052

Vischer Ferry Hydroelectric : Project No. 4679-049

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DAYTIME SCOPING MEETING

Hilton Garden Inn

30 Clifton Country Road

Clifton Park, New York 12065

Thursday, July 11, 2019

The public scoping meeting, pursuant to notice, convened at 9 a.m.

P R O C E E D I N G S

MR. CALLIHAN: All right everyone, we're going to go ahead and get started this morning. Welcome to the daytime public scoping meetings for the Crescent and Vischer Ferry Hydroelectric Projects. Crescent is on the left here. Project number 4678, and Vischer Ferry on the right, Project number 4679. I'm Jody Callihan. I'm a fish biologist at FERC and coordinator for the projects. We're here today to learn a little bit more about the existing environment at the projects, how they work, operate, and are maintained and most importantly to get some feedback from you all on any concerns you may have regarding project the effects of project operation on various resources such as fish, water quality, recreation, cultural resources, and whatnot.

I have some of the FERC project team here from headquarters today. I'll let them introduce themselves in a minute. And I will be working on aquatic resources for these projects, water quality and fisheries as well as geology and soils. Emily and John, if you wouldn't mind introducing yourselves.

MR. STOKELY: Hi, I'm John Stokely. I'll be working on the terrestrial resources on the projects.

MS. CARTER: I'm Emily Carter. I'll be doing on recreation and cultural resources.

MR. CALLIHAN: Thanks, guys. And also, the

engineer on the project is Monir Chowdhury, and the attorney is Rachael Ward. I have some housekeeping items. We have four exits around the sides here, and the restrooms are between here and the front desk on the right-hand side if you need those. If you haven't already done so, please sign in at the registration table there on the side. And there's also copies of our scoping documents on that table as well. John - does everybody here have a scoping document? John can pass them around if you guys need them, raise your hand if you need some. There's also some informational brochures back there on our FERC online and eLibrary systems.

We have a court reporter with us here today. He will be recording the meeting and preparing transcripts that will be available on our eLibrary site in about three to four weeks. And at the end of the meeting today I'll open it up for comments and discussions, and you can make oral comments at that time. Those will be recorded and placed in the public record for the projects. And we ask that when you speak you clearly state your name and affiliation so that the court reporter can assign the correct name to your comments.

Just an agenda of today's meeting. I'll go over FERC, introduce FERC, what we are, who we do and then talk about scoping and how it fits into our licensing process; and then Cindy Brady from NYPA will give an overview of the

projects a little bit regarding their history and operation. I'll come back on and we'll go over the preliminary list of resource issues that we've identified and will analyze in our NEPA document, conduct as part of our environmental analysis. Then we'll go over some important dates and how to stay informed throughout the licensing process. And unless you have a specific question on a slide or can't read something, we ask that you hold off until the end. Again, I'll open it up for comments and discussion at the end of the presentations.

So, the Federal Energy Regulatory Commission, or FERC, is a federal agency that's led by five commissioners when it's full, currently there are four. The commissioners are appointed by the President and confirmed by the Senate. We have 12 offices at FERC and a staff of about 1,500 employees. And Congress has tasked FERC with a number of responsibilities including regulating the interstate transmission of electricity, natural gas, and oil as well as reviewing proposals to build liquefied natural gas terminals and interstate natural gas pipelines.

And the reason we're here today is FERC is responsible for authorizing the construction, operation, and maintenance of non-federal hydropower projects that are in the public interest. FERC's authority derives from Part One of the Federal Power Act and we issue licenses for terms of

30 to 50 years. There are about 2,500 FERC-regulated hydroelectric dams across the country shown by these red dots. You can see that they're concentrated in areas where we have lots of topography here in the West, and also in New England and Upstate New York here where we can capitalize on that fall of water and harness it to generate hydroelectricity.

And collectively, all of these projects generate enough electricity to power about 10 to 15 million households annually. Now if the Commission deems the projects are in the public interest, the licensing process will end with a license order. The license order contains terms and conditions specifying how the project should be operated and maintained. For example, specifying the mode of operation such as run-of-river whereby the amount of water exiting the projects approximates the inflow for the projects. And the license article also contains what we call environmental protection mitigation and enhancement measures, or PM&Es. And these are just what they sound like. They are measures to ensure the protection, mitigation, and enhancement of resources that are affected by the operation of the project. Some common ones are minimum flows, allowable reservoir elevations and fluctuations, and both of these can vary seasonally.

But how do we get to the license order? Well to

inform license conditions, we first need to know what resources are present at the project and potential project effects on those resources that are of public concern. And that starts with scoping and why we are here today. And that is to receive public input on and scope the potential resource issues associated with the operation of the projects. For example, fish entrainment mortality may be one of these. And we want to hear from you if you have any concerns regarding project effects on various resources.

And scoping is also meant to help us gather information, to help us determine if there may be studies that need to be done to help better understand how those resources can be affected by project operation and to potentially evaluate the effectiveness of various environmental measures to inform license conditions. NYPA will be undergoing the Integrated Licensing Process, and it's a very iterative and deadline-driven process, a lot of back and forth between all of the stakeholders, and there's a lot of milestones and deadlines to try and keep everyone on track and the process moving.

And I'm just going to give a broad overview of the process here. A table of the specific deadlines can be found in the back of the scoping document in Appendix B. So, we're early on in the process now in what we refer to as pre-filing, because the license application has not been

filed yet. The NOI and the pre-application document, or the PAD, were filed by NYPA in early May. We them submitted our, excused me, issued our scoping document in early June and today we're holding -- and yesterday -- the scoping meetings and environmental site visits to solicit comments on the projects and study requests.

NYPA will use those study requests and work with stakeholders to develop a study plan that they will execute to provide information that will help them prepare their license application. Once they file their license application, they enter into what we call post-filing; and the licenses for these projects expire at the end of May, 2024. So, the final license applications will be due on May 31, 2022. Once we receive those, we will review them for adequacy and solicit public comments on the license application.

When we have all the information we need, we'll conduct an environmental analysis, our NEPA document, usually in the form of an EA, and also solicit public comments on that. And the Commission will use that NEPA document to determine if a license will be issued and if so, what terms and conditions and protections, mitigation, enhancement measures it will include.

A little bit more about scoping. Scoping is required by the National Environmental Policy Act. And

again, it's all about gathering information. The public input we receive today from stakeholders will help us identify the resource issues and project effects that we'll analyze in our NEPA document. And we're also here to gather existing information that may help us conduct our environmental analyses; for example, resource reports or, for instance, fishery survey data. And in some cases, we need additional and new information to complete our analyses, and these come in the form of study requests. And anyone can submit study requests, I'll go over at the end of the presentation, a little bit more about that. But an important thing to remember here is the date; you'll see this multiple times throughout the presentations today; is that all comments and study requests are due on August 9, 2019.

Now one more slide here before I pass it over to Cindy. Scoping also involves identifying and receiving input on cumulatively affected resources. And what we mean by cumulative effects is that a given resource is affected by the project as well as other activities in the basin, and a common example of this is diadromous and migratory fish. For example, on the Mohawk River, Blueback Herring have to go through six hydroelectric plants, up to six hydroelectric plants as they egress from the Mohawk River en route to the ocean. Scoping also involves analyzing reasonable

alternatives to the project and the Applicant's proposed action, and resources not requiring detailed analysis.

So, be thinking about these topics as we go throughout the presentation today, if there's any additional resources of concern that you may have, if you feel there are any information gaps, please let us know. And that preliminary list, bulleted list of resource issues starts on page 16 to 19 there of your scoping document where you can follow along. And if during Cindy's presentation, if any of her information on how the project operates sparks any concerns, just let us know about that or any additional information you would like to see gathered.

So, with that, I will pass it off to Cindy.

MS. BRADY: Good morning. So, we'll get started. The presentation is the same one that I gave last night, so for many of you, that was my dress rehearsal. So, we'll start out with the history of the projects.

The Crescent and Vischer Ferry Dams were built to support canals. Back in the early 1900s, there was a major expansion of the existing barge canal system. During that time the Crescent and Vischer Ferry Dams were designed and constructed to facilitate the expansion of the canals; and in 1913, hydropower was first harnessed. When these projects were built they had two generating units each. In 1984, FERC issued a license to NYPA. That's a 40-year

operating license to operate the Crescent and Vischer Ferry projects; and those licenses expire May 31st, 2024.

In the 1980s, after NYPA took control, the projects were expanded and each project was expanded from two units to four units and it increased the generating capacity at each of the sites to 11.8 megawatts. In 2007, FERC issued a modifying order approving the downstream fish passage facility. So we're here today in 2019 and we're kicking off the relicensing.

The projects are located on the Mohawk River. Crescent Project is located ten miles downstream of the Vischer Ferry Project. This pink area designates the Crescent project boundary and the yellow the Vischer Ferry. So, the projects are located on the Mohawk River and there are a number of other hydropower projects on the Mohawk, and this table shows you the relationship they have from the confluence of the Hudson River. So, 1.3 miles upstream from the Hudson River is the New York State Dam. It's operated by Boralex, and it's FERC project 7481. Upstream from that, two miles upstream from the confluence of the Hudson River, so just barely upstream from the New York State Dam is School Street Dam. That's operated by Brookfield. And that project can be seen from the Crescent Project.

The Crescent Project, operated by NYPA, one of the projects we're here discussing today, 10 miles upstream

from the Crescent Project is the Vischer Ferry Project, and 80 miles upstream from the confluence of the Hudson; so approximately 65 miles or so upstream from Vischer Ferry is the Little Falls Project. That's operated by Cube Hydro and that's in the process of its relicensing currently as we speak as well, too. These FERC project numbers, given on the right-hand side of the table will facilitate if you want to learn more about those projects you can look those up on the FERC website.

Again, here's a graph or a table that's a little tough to see, but just gives you -- here is the Mohawk River, the Hudson River right here, and bunched together, the New York State Dam, School Street Dam, Crescent, Vischer Ferry, and then the Little Falls Project up here.

So, the Crescent Project is located in the Counties of Saratoga, Albany, and Schenectady. Towns of Waterford, Colonie, Half Moon, Clifton Park, and Niskayuna, and it's adjacent to Canal Lock E-6, which is the upstream lock of the Waterford flight. The Vischer Ferry Project is located in Saratoga and Schenectady Counties, in the towns of Clifton Park and Niskayuna, located in the City of Schenectady and that's adjacent to Lock E-7.

The projects are essentially twins of each other. They have the same generating capacity, the same capacity to flow, the same amount of water. So, each project is an 11.8

megawatt project. Each project consists of four operating units. There's two Francis type units that are capable of 2.8 megawatts each and two Kaplan type units which are capable of 3.1 megawatts. So, the combined total of those is 11.8 megawatts. The flow range for each of the facilities are 350 cubic feet per second to just over 6,600 cubic feet per second. And you can see flow types here.

So we get the minimum flow because if one Kaplan unit were running it would take a minimum of 350 cubic feet per second to turn that on. And then as the flows go up, if we had high river flows, we had all units running, we would have - two units running at 1,500 cubic feet per second and two at 1800 feet per second. That's where you get your 6,600.

The crest elevation at Crescent, Vischer Ferry is 185 feet in the summer. That's Barge Canal Datum. In the winter, it's 184 feet, again, Barge Canal Datum. The difference is because during the canal season, flashboards are installed. The flashboards are 12 inches high. At Vischer Ferry, the normal summer elevation is 213.25 feet. In the winter, it's 211 feet. Flashboards are installed at the Vischer Ferry Project. Those are 27 inch flashboards and again they are installed for canal season. In in early spring, and out in October-November.

Both plants are operated as run-of-river. That

means there are no peaking operations conducted at these plants and the minimum flow at Crescent during the navigation season is 250 cubic feet per second and during the non-navigation season it's 100 cubic feet per second. At Vischer Ferry, all year long it's 200 cubic feet per second.

So, the Crescent plant is located on this side of the river, nearest the powerhouse, and it consist of three dams. Dam A, Dam B, and just below Dam B here is Dam C. This is the Waterford flight coming up, and this is what bypasses the falls down near the School Street Project. So, the normal river flow goes this way, and as we'll point out later there is a fish deterrent system and there are acoustic deterrents put in that try to guide fish around this island here and to the fish passage facility at Dam A.

The Crescent Project is operated as run-of-river. The 12 inch flashboards are installed during the navigation season. When the flashboards are installed, the minimum flow of 250 cubic feet per second is spilled through the flashboards, through an 80 foot wide opening by 1 foot high opening in Dam A. And that's to provide downstream passage for the adult and the juvenile Blueback Herring.

During the non-navigation season, the minimum flow is 100 cubic feet per second, and that's almost always passed through a turbine if river flows are at least 350

cubic feet per second or greater. If the flows happen to be less than the flow that would be needed to turn on at least one unit, then the minimum flow can be passed through the sluice gate.

There's an acoustic deterrent system installed seasonally to guide fish away from the turbines and towards the fish passage system.

The recreation associated with the Crescent Project. There is a tailrace bank fishing area and a picnic area. And again here's the Crescent Project, that's where those sites are located. So, the Vischer Ferry Project is on the opposite side of the river, the powerhouse is over here. And that consists of Dams D, E, and F; and over here, this side of the river is the lock. This is Lock E-7 for the canal. So, the normal river flow is this way and 10 miles downstream is the Crescent Project.

Again, these facilities are essentially twins of each other. They're, this Vischer Ferry is also operated as run-of-river. There are 27-inch flashboards installed, so during the summer the crest elevation is 27 inches higher than it would be during the winter or the non-navigation season. There are two separate openings in the flashboards to provide downstream passage. One is to accommodate the juvenile Blueback Herring, and that's open from September through November. And the other one is for adults, and that

opening is from May to July. A minimum flow of 200 cubic feet per second is required to be, or inflow, whichever is less, is required to be passed at Vischer Ferry. There's also the acoustic deterrent system installed seasonally to guide the fish away from the turbines and towards the fish passage.

The recreation facilities associated with the Vischer Ferry Project. There's a scenic overlook, a tailrace fishing area and the Niskayuna boat launch, which is located over near Lock E-7. And the other location is like here in relation to the Vischer Ferry Project, of those facilities.

We have developed a public website; the website is located at this link, www.nypa.gov/crescentvischerferry. All documents on filings, presentations, will be located on here as well as schedules, upcoming meetings. After the meetings, after the meetings, the meeting content will be included on here. There's a contact us site where you can sign up to become, I guess 'member' is the wrong word, but to be listed so that you will receive information throughout the whole five to five-and-a-half year process that Jody discussed earlier.

So with that, thank you.

MR. CALLIHAN: Thanks, Cindy. I did see a few people come in so if you haven't signed in, please do so on

that sign in sheet on the side table there. Thank you.

We're going to go ahead and go over now our preliminary list of resource issues that we've identified; again, these are located in the scoping document, so, when we go over these, again be thinking if there's any additional resource concerns you have or anything that we've identified that you disagree with, if there's anything you think we missed.

Starting off with geology and soils, we will analyze the effects of continued project operation and maintenance on shoreline stability and erosion upstream and downstream of each project.

For aquatic resources we've identified water quality as a cumulatively effected resource. Any time you see this asterisk that means that the resource has been identified as a cumulatively effected resource; and this includes dissolved oxygen and temperature. And in their PAD, NYPA has proposed to conduct a water quality study at the projects. That will be further developed during the study process. We also plan to assess the need for the current minimum flows at the projects that Cindy spoke about, 100 CFS at Crescent, and 200 CFS at Vischer Ferry. Given that there's no real bypass reach at these projects and the powerhouses are integral with the Dam, and these flows already provided as part of fish passage flows during

the navigation season or generation during non-navigation season.

Continuing on aquatic resources, we've identified the entrainment mortality of migratory Blueback Herring and American Eel as cumulatively affected resources. And we'll also analyze the entrainment or turbine mortality of important resident game fish such as Smallmouth Bass and Walleye.

For terrestrial resources, we'll look at the effects of continued project operation or maintenance on wildlife and mechanical resources, riparian and wetland habitat, and species of special concern like the Bald Eagle, Osprey, and Culvers Root.

For threatened and endangered species, we'll look at the effects of continued project operation and maintenance on federally listed species such as the threatened, federally threatened Northern Long-Eared Bat, which to our knowledge is the only federally listed species in the project area.

For recreation, we analyze the adequacy of the public access and recreation facilities to meet current and future recreational demand. And the effects of the project on recreational opportunities and river access. And in its PAD, NYPA does propose to conduct a recreation site and facility inventory to support this analysis.

We analyze the effects of continued project operation on historic properties and archaeological resources as well as land use and aesthetic resources.

And for developmental resources we will consider the effects of any recommended environmental measures on the project's economics in terms of lost generation.

Now, a little bit about submitting comments and study requests. Again, when I open it up at the end of the presentation, you can give those oral comments today, and you can also file any comments you have on the PAD, Scoping Document 1, and also file study requests by August 9, 2019. And we do prefer electronic filing. We refer to it as eFiling, but you can also mail hard copies to the Secretary of the Commission.

And the instructions for electronic filing and hard copy filing are filing on page 22 of the scoping document and also we have some brochures on how to file documents with FERC on the side table there that are helpful as well. And it's important when you're submitting study requests that they meet all seven of our study criteria. So, to be given full consideration by the Commission the study requests must address each of these seven criteria that are shown here, and this list is also found in Appendix A of your scoping document. An important one is the number five, the nexus to the project operations and effects.

Basically, this means that the effect that you're proposing to study, you must demonstrate how you believe it is tied or somehow related and connected to the operation or maintenance of the project.

Now, some important upcoming dates and deadlines. Again, any comments and study requests are due to be filed with the Commission by August 9th, 2019. NYPA will develop their, use those to develop a proposed study plan that will be due September 23rd. We'll have a study plan meeting back here; NYPA will hold that in October 2019. We will solicit, then we'll solicit comments on the study plan, the proposed study plan. Based on those they may revise the study plan and they'll develop and file a revised study plan in January 2020, and there will be comments on that as well which we will consider in our study plan determination that will inform NYPA of the studies they're required to do.

And one date is wrong on this, the first field season -- and it's not an actual date -- but in Scoping Document 1 we had the first field season as spring, summer of 2021; that should be spring, summer 2020, so this is the date.

Now how to stay informed throughout the licensing process, when you're using our electronic system to search for information about these projects, the docket numbers are very important; and I have those two numbers here, again,

for the projects. The docket for Crescent is P-4678 and for Vischer Ferry, P-4679. And we really encourage that you register at FERC Online and eSubscribe to the projects. Now, this way you will get, anytime that we issue a document or a letter or anything, anytime something is filed with us you will receive an email notification that has a link to the document -- usually it's a PDF in our eLibrary system -- so, you can choose to open that up, save it, print it, whatever you would like to do with it.

And our eLibrary system houses all of the public documents in the project record; and also we have a mailing list and that can be found on pages 20 to 33 of your scoping document, and if you wish to be added or removed from the scoping document you must make a request to do so. We cannot do that ourselves. There has to be a request made for that. Instructions for doing so are also located in those pages on the scoping document.

Now, if you're on our mailing list you will only receive hard copies of everything that goes out from us. All the things that we issue but not things that come in. So, that's why we really encourage that you eSubscribe to the projects. That way you get everything going out from us and all the comments and filings coming in to the project record.

So, for that, I'd like to open it up and receive,

if anyone has any comments, concerns, questions, or would like to discuss anything while we have the resource agencies, and NYPA, and members of the public in the room with us today. Now's your chance to be heard, so we'll open up the floor for comments and discussion.

Anyone? Don't be shy.

MR. WILEY: Everybody can probably hear me. [No mic]

MR. CALLIHAN: Okay.

MR. WILEY: I have two minor comments.

AUDIENCE: Name?

MR. WILEY: John Wiley, Fish and Wildlife Service.

There's another project on -- Listed -- extension on the first branch, whatever it is, the delta Mohawk River.

[Inaudible] But there's another project on the Mohawk there. Then the watershed -- (inaudible)

So I don't know if that's been replicated in the PAD.

MR. CALLIHAN: Anyone else? Yes, sir?

MR. HAY: Duncan Hay, National Park Service, power program based in Boston.

By way of background, we will be filing written comments; we often provide comments in collaboration with other DOI bureaus, Fish and Wildlife Service and Bureau of

Indian Affairs; sometimes (inaudible) as yet to be determined.

National Park Service doesn't get involved with every hydropower project, but FERC regulations state that applicants shall consult with the NPS regarding recreational resources and perfection of historic and archaeological properties. We have about six staff people scattered around the country, which is why we simply can't get involved with every project; but we have a project nexus at Crescent and Vischer Ferry. Both projects are within bounds of Erie Canalway National Heritage Corridor, which was established by Congress in 2000; and the boundaries of that are one municipality on either side of the Erie Champlain, Cayuga Seneca and Oswego Canals. And the inventory is managed by the National Park Service and a nonprofit.

We also have responsibility, stewardship responsibilities for national historic landmarks. There are many, many National Register properties, many thousand; of those, about 28 percent have the level of national significance and historical integrity to be designated National Historic Landmarks by the Secretary of the Interior.

The barge canal system was designated in 2016, and the Crescent Dam, Vischer Ferry Dam and the powerhouses were included as contributing features to that NHL

nomination because they were all built by the Department of Public Works as part of barge canal development. So that falls in.

Also the PAD -- another NHL abuts the project that was not identified in the PAD was the Harmony Mills National Historic Landmark District, the Cohoes Company Dam and Gatehouse, and the power canal are part of that NHL district; and as you saw yesterday, are clearly visible from the Crescent plant. So the headrace of that, part of the tailrace across empties into the head pond of the School Street project.

I've got a couple of other, similar minor corrections to the City's presentation, but we can -- those are minor tweaks in terms of dates and some other things.

And I guess that's it. The rest of you will see in writing.

MR. CALLIHAN: Thank you.

MR. DUGGAN: My name is Jim Duggan. I'm a retired architect, urban planner. And I represent informally the interests of many stakeholders in Schenectady and Scotia with respect to the watershed's runoff, which hasn't been mentioned yet. We suffer a great deal of water surface elevations that invade long-developed properties; that is, developed long before the barge canal in Schenectady County. And the location of the Vischer Ferry

Dam and its fixed concrete design minus any water management gates has provided a, has caused a backwater situation, and the removal of the influence of downstream-sloped bottom from the prior natural drainage, and now we have a reservoir which is very useful for the barge canal's purposes as well as the generation of electricity, but has become a threat to community well-being.

And this has occurred for well over a century with many, many casualties, both financial and functional. I'm representing the interests, and am very grateful for this opportunity provided by the Power Authority and FERC to interject this consideration into the relicensing. I'm very pleased at the coincidence to be adjacent to a person representing the National Park Service and historic landmark interests because the neighborhood in which I've lived for 49 years, the historic stockade in Schenectady, is the first historic district in New York State, and has benefited from that designation for many, many decades.

So this is not a new concern; however, I'm here to thank-- and I'm repeating myself -- the Power Authority and FERC for giving us the opportunity to have an official consideration of our concerns and the risks we have faced and continue to face. We will be submitting before the 9th of August deadline, and we have enjoyed our relationship with the Power Authority to this point in opening the

consideration. Heretofore, the operations were almost oblivious to the concerns of stakeholders along the waterfront despite the fact that prior to the construction of the Vischer Ferry Dam, experience in the neighborhood has caused development to occur on higher ground and damage was very, very small.

However, almost immediately with the presence of even the unfinished or incomplete dam, we had a record flood. Now the hydrologic quantity of water is one thing, but the hydraulic resistance of this dam is something else. And it is a man-made situation. It arises from the planning and design thinking of the late 19th century.

We believe it is time for smart 21st Century adaptation to occur so that the future of the canalized Mohawk River in the Schenectady area can be something that we celebrate in unlimited ways, whereas at the moment there's a great deal of concern that seems to be unresolved.

I think I will finish now and again thank the Power Authority for their willingness to collaborate with us in trying to move all the interests forward for the first time with respect to runoff flooding and the Vischer Ferry Dam.

MR. CALLIHAN: Thank you, sir.

Anyone else?

MR. WILEY: John Wiley, U.S. Fish and Wildlife Service. I was wondering if NYPA could speak to the status of the efforts in relation to the stockade, and whatever is being done in that regard. I understand there is something going on.

MR. SAEZ: Brian Saez, New York Power Authority. We are working with, we've met with Mr. Duggan and we are looking at some studies on the river. We worked with Gomez & Sullivan to try to model some of the ideas that Mr. Duggan and his people have come up with and see what is realistic, what could be done and what could not be done. So we are going to look to study some of these things; but as you well know, it's a complicated thing, hydrology, the ice chaining issues are all very difficult subjects to get your arms around.

So, we are studying it and we are going to study it further, but at this point I really don't have anything concrete to talk about; but it's certainly in our vision and we're actively working to try to see what can be done, if anything, to improve the situation.

AUDIENCE: Is this something that FERC will consider in the scoping document?

MR. CALLIHAN: Yes. It's not in there right now, the effects of operation on the project whether there's any exacerbation of flooding related to the operation of the

project, but we will add that and include it in our SD-2 along with anything else that arises as a result of the meetings.

Anyone else?

I have some questions for the agencies.

I'll speak from up here, so -- I'll speak loud enough, because I need to be able to read as well.

A couple for NYPA: Do we know how much flow goes through the fish notches at Vischer Ferry? At Crescent it seems to be 250 CFS, but do we have an idea what that flow is through the juvenile and adult notches at Vischer?

AUDIENCE: No, I don't.

Off the top of my head, I can't quite recall exactly. It's less than Crescent; 90 sounds about right, but we can get those numbers back to you.

MR. CALLIHAN: 90 CFS, maybe?

AUDIENCE: Maybe, yes. We'll have to confirm.

MR. CALLIHAN: Thank you.

The approximate depth of the intakes to the project? The bottom half of the water column? I believe typically the case --.

AUDIENCE: That's one that Dave couldn't even answer yesterday. But down about 20 feet deep was his thought, for the forebay.

MR. CALLIHAN: And it's still a little unclear to

me if the upstream, there's that six inch drawdown in the current license and thinking about whether that needs to be continued. It's unclear to me still what kind of navigation operations would cause the pool to drop that much if lockages, you know, passing vessels through the locks really causes a drop in the impoundment levels.

AUDIENCE: I think it has to do with a dam; you have to look upstream. Again, we don't have any pictures, but -- they consist of the bridge-like structure that goes across the entire river. There are these large lower gates, which are lowered in the spring; and on top of those are some smaller, we call them pans -- there's around 20, depending on which lock you're looking at.

So the way they regulate their water upstream if they're getting lulls in their normal operating range say at Lock 8, and they only have one gate out, they'll drop the last pan, they'll drop that in and that cuts off about 2,000 CFS.

We've added the gauge -- USGS Doppler gauge at Freeman Bridge -- to try to help the techs with a little bit earlier warning when that happens. We didn't have that until 2010. So essentially the only way you operate, hopefully the lock operators will give you a call when they drop their hands in or when they pull them out; but if they drop that last one in we didn't know. Essentially,

everything is running smoothly at Vischer Ferry, they're set at say 2,000 CFS going through a unit, and then all of a sudden the forebay elevation, the indication starts to drop, as that flow suddenly goes away, it just drops. So they would have to quickly react, and sometimes that would result in, not using six inch drawdowns, but you would come close to that, maybe four inches.

So that leeway was there, just the practicalities of trying to operate a hydro station remotely, or even if you had a person there; it's just very difficult to do. We needed that little bit of a band. It's not a very big band, but up to six inches. Usually we're able to keep it within an inch or two of normal range.

MR. CALLIHAN: That's helpful, that clarifies that. That's appreciated.

AUDIENCE: So do you think with the gage upstream that facilitates it?

AUDIENCE: Yes, we're still -- unfortunately, that acoustic Doppler is a little bit buggy as far as, we haven't really been able to get a real time signal out of that thing yet, into the control room. The plan was to try to get real time into Gilbola, and we'd send it over to Brookfield to Marlboro, Massachusetts.

It hasn't proven to be that reliable yet where we could say we never need the six inch band. But again, it's

very rare when we draw it down six inches. If we do, we have, the units will automatically trip off, but there could be some situation where if we took away the six inch band but we would end up needing it anyway. And I can't say that we would be able to get rid of it. I don't know that our technology in our systems are that foolproof yet that we would never need it in this situation. In the wintertime it's easy, easier, it acts just like a river, but in the summer with these movable bands it's often down all the time in certain situations, and I can't say that we would be able to give that up and not still end up using them.

AUDIENCE: Does the data on that tell you when they're going to be moving in April? Would that be helpful if they did?

AUDIENCE: They tell us, well, you know, sometimes we think they made an operation and they swear they didn't. So it's so complicated with all the different dams upstream and all the different hydropower plants that are feeding into that. Sometimes, the flows just seem to vary, you know, they go up and down and we can't really always put our finger on what happened. It could have been something that happened two days ago.

So, it's just very unpredictable. We've certainly been adding more gauges and trying to modernize things over the past several years, canal fording before

NYPA started working with us; no. Merged with them. They were adding what they could, but it's still a hundred year old system. Regulating that water is still tricky and it's just things that seem to happen sometimes that we can't always explain.

MR. CALLIHAN: My last for NYPA. Looking in the PAD, it says the GE plant in Schenectady withdraws about 4 to 11 million gallons per day from the Vischer impoundment, and the Knolls Atomic Power Laboratory, 1.7 to 3.7 million gallons per day from the impoundment.

My question is, from what I gathered yesterday, that occurs -- those withdrawals occur directly from the Vischer Ferry impoundment, so I'm curious as to what they're used for and whether those withdrawals are somehow returned to the impoundment; kind of recycled or whether they're more kind of a permanent withdrawal. If you could shed some light on that.

AUDIENCE: I can't add too much as far as specifics of their operations. I believe you're probably referring to the Knolls Atomic and the GE Research Center, or between Vischer Ferry Lock 7 and Reckford. I don't know if the Schenectady plant has an intake; I'm not familiar with that.

I'll just assume that they're using it for cooling, a lot of it, much like we do in hydropower plants,

that they are returning it. But I can't say for sure.

AUDIENCE: We have 50 public speaking permits.

MR. CALLIHAN: What's that, Mark?

MR. SHU: There should be public speakies. The New York State version of.

AUDIENCE: That's where the information came from, for the pre-application document.

MR. SHU: I still -- what they say in terms --

AUDIENCE: Yes, I don't know, either. But it came from the state records.

AUDIENCE: I'll make the observation that I've been in that neighborhood, and if there's an 11 million gallon cooling tower up there, I would have seen it. So I think it must be --

MR. CALLIHAN: I would think so, and I just wanted to clarify that.

And I have two questions, maybe this is more for the consultant preparing the PAD. I was curious why you guys -- maybe for you, Wendy -- why only seven years of flow data was used to calculate the hydrology statistics; and particularly that included Hurricane Irene and Tropical Storm Lee -- so that could really bias upwards the low duration curve of some of the flow data.

There was a reason for that? Why only seven years was included when we have a lot more data in the USGS

gauges?

MS. BLEY: It was simply the data that the Power Authority had readily available for the PAD document.

MR. CALLIHAN: Okay.

MS. BLEY: That had been consistently reported the same way. So that was all.

MR. CALLIHAN: And also in the PAD, it mentioned in the benthic invertebrate section that over 90 percent of the mussels collected on the multi-plate surveys were Zebra mussels, but it was unclear if there were actually any fresh water mussels collected on those multi-plates; and I think they were five week deployments. I'm not even sure that those mussels would settle on multi-plates given that time of the year and that short of a duration.

Can you comment on that at all?

MS. BLEY: I really don't remember. The source document will have -- it probably came from the State of New York, and I just have to go back and look at the source document. I think we provided as much detail in the PAD as was available from that source, but we've got all the source documents so I can check.

MR. CALLIHAN: And I have a couple for the resource agencies. If you look at page -- I don't know if everyone has a PAD -- just curious on what all fisheries survey data we have from the impounds in the immediate

vicinity of the project. There's a black bass survey that's mentioned on page 4-44 of the PAD, and then there's some river-wide surveys that are mentioned on bigger, 441. Those river-wide surveys just show the locations of the locks, so it's unclear as to which location they're actually sampling and what data are available from those areas.

That may be a question for you also, Wendy.

MR. VAN MAARA: This is Chris Van Maara with the December. I would have to back and look. I'm not sure it's specifically -- in reference to that question, I don't know what the details are; I'm uncertain.

MR. CALLIHAN: As to whether we have any information on what's in the impoundments.

MR. VAN MAARA: I'd have to go back and look; I don't know that we have anything recent outside of the USGS.

MR. CALLIHAN: Would all those be -- if I was poking around on Google, I couldn't find -- but we can get those reports, right?

MR. VAN MAARA: Correct.

MR. CALLIHAN: And also a question for the agencies, what do we know about eel abundance and distribution in the Mohawk River, basically from the confluence of the Hudson up to Little Falls?

MR. VAN MAARA: We don't have a lot of data specifically targeting them, based on the fact that there

are different sites that we have to deploy. I think that will be of interest from our end, for our studies. We do not have a lot of eel-specific -- we do occasionally.

MR. CALLIHAN: How far up?

MR. VAN MAARA: I'm not sure exactly how far.

MR. CALLIHAN: Do you know if, it's the fall migration season usually, for eels and silver eels, you would expect them to move out in the fall?

MR. WILEY: I'll say for Region 6 that they don't find them up there.

MR. CALLIHAN: What's that?

MR. WILEY: Their fishery staff said that they didn't find eels up into Region 6.

MR. CALLIHAN: They did?

MR. WILEY: So we're not having a new eel -- at Little Falls. But they're more common down this way. We have some presumption that they don't move through the locks as well as herring do.

MR. CALLIHAN: Okay. And do we know anything about alewife in the Mohawk? I know they're hard to distinguish from Blueback.

MR. VAN MAARA: Typically it's a timing issue related to locks. So they tend to -- ahead of the locks. based on the timing of the canal movement.

MR. CALLIHAN: So they naturally move up before

the navigation season opens?

MR. VAN MAARA: Correct.

MR. CALLIHAN: What time of year, roughly, would you say they move up?

MR. VAN MAARA: It's close; it's within a month or so.

MR. CALLIHAN: And is there potential spawning habitat in the area that they could access, do you believe?

MR. WILEY: Down at the confluence?

MR. CALLIHAN: Yes.

MR. WILEY: Yes. To answer your other question for the silver eel migrations; we have no idea. Even in the lower parts of the Hudson. Different watersheds on the East Coast have different dates and periodicity for out-migrations.

MR. CALLIHAN: Anyone else have anything?

AUDIENCE: I had one question for NYPA. The cooling water for the -- I guess it's the Kaplans, the cooling water. Those intakes for the cooling water are behind the racks. How much water do you draw?

AUDIENCE: All four of the units use cooling water. It comes from the trash rack area. Walk down the stairs, there we saw some stringers and pumps; that is the draw. So it would be brought in there, and then it goes to all the different units.

As far as the gallons per minute, I don't know off the top of my head; we'd have to get back to you on that, when we have all four units running, what the maximum would be. I don't recall that number.

MS. CAIN: Nicole Cain, D.E.C. This is a question: Do you guys have a sort of program for invasive species, namely the Water Chestnut?

AUDIENCE: We do not, as far as the Water Chestnut.

MR. CALLIHAN: Anyone else have anything. Comments? Questions?

So again, filing comments and study requests, those are due by August 9, and we'll be back here in October for the proposed study plan meeting.

So I thank everyone for the time and coming out and giving their input, and for NYPA for hosting the site visits yesterday; they were very helpful and informative, and look forward to seeing everyone in the future on this licensing process.

So thank you, and have a good day, and safe travels to wherever you're heading back to.

[Whereupon, at 10:06 a.m., the public comment meeting concluded.]

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceeding before the FEDERAL ENERGY REGULATORY COMMISSION in the Matter of:

Name of Proceeding: Crescent Hydroelectric and Vischer Ferry Projects

Docket No.: P-4678/P-4679

Place: Clifton Park, New York

Date: Thursday, July 11, 2019

were held as herein appears, and that this is the original transcript thereof for the file of the Federal Energy Regulatory Commission, and is a full correct transcription of the proceedings.

Dan Hawkins

Official Reporter